

CLAIMS:

1. A method of operating chromatography column apparatus;

5 the apparatus comprising a column tube having first and second ends, and first and second discrete end cell structures which are associated with the respective ends of the column tube and positionable to close off the column tube and thereby define therein a column space for retaining chromatography medium, in use of the apparatus;
10 at least the first end cell structure comprising a piston portion fitting slidably in the column tube;

the operating method being characterised by separating the second end of the column tube and the
15 second end cell structure to provide an access spacing between them, advancing the piston portion of the first end cell structure through the column tube to expose it at the open second end of the column tube, and carrying out maintenance of the piston portion thus exposed.

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2. A method according to claim 1 in which the column tube is axially vertical with said first and second ends at the top and bottom respectively.

25 3. A method according to claim 1 or 2 comprising using a powered drive, mounted on or adjacent the second end structure, to separate the column tube and the second end cell structure to provide said access spacing.

4. A method according to claim 1, 2 or 3 in which a
powered drive is used to move said piston portion
relatively forwardly through the column tube to be
5 exposed at the second end thereof as aforesaid.

5. A method according to claim 3 and claim 4 in which
the same powered drive is operated to separate the column
tube and second end cell structure, and to move the
10 piston portion through the column tube.

6. A method according to any one of claims 3 to 5 in
which the powered drive is hydraulically actuated.

15 7. A method according to any one of the preceding
claims in which the piston portion is supported from
behind by an insertable support structure that reaches in
from the first end of the column tube, with sufficient
axial reach for the front of the piston portion to reach
20 and preferably to project beyond the second end of the
column tube for said maintenance.

8. A method according to claim 7 in which a powered
drive advances the piston portion to said exposed
25 position by means of a drive connection via said
insertable support structure.

9. A method according to claim 8 in which the powered drive comprises plural hydraulically-actuated drive rods extending axially up the outside of the column tube, said drive rods being circumferentially spaced from one
5 another, driven by cylinders mounted at or adjacent (preferably below) the second end cell structure, and connected to the insertable support structure by a radial connecting structure such as an adjustable flange which crosses radially above the edge of the column tube at the
10 first end thereof.

10. Chromatography column apparatus operable in a method as described in any one of claims 1 to 9, comprising said column tube and first and second end cell structures, and
15 in which the first end cell structure has an insertable support structure which supports the piston portion from behind, connects beyond the first end of the column tube to a drive means for controllably moving the column tube and piston portion axially relative to one another, and
20 has sufficient axial reach for the piston portion to be exposed at the open second end of the column tube as aforesaid while still supported by the insertable support structure.

25 11. Chromatography column apparatus according to claim 10 in which the drive means comprises one or more hydraulic cylinders and one or more respective axially-extending drive rods.